6. The method of claim 5 further comprising:

receiving a second protocol data unit at said Lower Medium Access Control from said Physical Control; and

outputting a second service data unit to said Upper Medium Access Control.

7. The method of claim 5 wherein said first medium-access-control service is transmit queueing.

8. The method of claim 5 wherein said second medium-access-control service is channel access.

9. A method comprising:

receiving a service data unit from an Upper Medium Access Control; and

outputting a protocol data unit to a Physical Control;

wherein said Physical Control provides a first medium-access-control service that is independent of the state of said Physical Control; and

wherein said protocol data unit is based on:

(i) said service data unit, and

(ii) a second medium-access-control service that depends on the state of said Physical Control.

10. The method of claim 9 further comprising:

receiving a second protocol data unit from said Physical Control; and

outputting a second service data unit to said Upper Medium Access Control.

11. The method of claim 9 wherein said first medium-access-control service is transmit queueing.

12. The method of claim 9 wherein said second medium-access-control service is channel access.

13. A method comprising:

receiving a service data unit from an Upper Medium Access Control that provides a first medium-access-control service; and

outputting a protocol data unit to a Physical Control;

wherein said first medium-access-control service is independent of any physical attribute of all signals transmitted or received by said Physical Control; and

wherein said protocol data unit is based on:

(i) said service data unit, and

(ii) a second medium-access-control service that is dependent on a physical attribute of a signal transmitted or received by said Physical Control.

14. The method of claim 13 further comprising:

receiving a second protocol data unit from said Physical Control; and

outputting a second service data unit to said Upper Medium Access Control.

15. The method of claim 13 wherein said first medium-access-control service is transmit queueing.

16. The method of claim 13 wherein said second medium-access-control service is channel access.

17. An integrated circuit comprising:

a microprocessor for generating a message to be transmitted to a remote station via a service data unit;

circuitry for:

generating a protocol data unit based on said service data unit, and

providing a first medium-access-control service; and

an output for outputting said protocol data unit to a first circuit comprising:

a Physical Control, and

a second circuit for providing a second medium-access-control service;

wherein said first medium-access-control service is independent of the state of said Physical Control; and

wherein said second medium-access-control service is dependent on the state of said Physical Control.

18. The integrated circuit of claim 17 wherein said first medium-access-control service is transmit queueing.

19. The integrated circuit of claim 17 wherein said second medium-access-control service is channel access.

20. A wireless station comprising:

a microprocessor for generating an outgoing message to be transmitted to a remote wireless station via a service data unit;

a first circuit for:

providing a first medium-access-control service, and

generating a first protocol data unit based on said service data unit;

a second circuit for:

providing a second medium-access-control service, and

generating a second protocol data unit based on said first protocol data unit; and

a Physical Control for:

generating a third protocol data unit based on said second protocol data unit, and

transmitting a signal based on said third protocol data unit to said remote wireless station;

wherein said first medium-access-control service is independent of the state of said Physical Control; and

wherein said second medium-access-control service is based on the state of said Physical Control.

21. The wireless station of claim 20 wherein said Physical Control is also for:

receiving a second signal from said remote wireless station, and

generating a second service data unit based on said second signal;

wherein said second circuit is also for generating a third service data unit based on said second service data unit;

wherein said first circuit is also for generating a fourth service data unit based on said third service data unit; and

wherein said microprocessor is also for receiving an incoming message from said remote wireless station via said fourth service data unit.